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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,777	08/19/2003	Wei An	A0312.70495US00	4131

7590 03/14/2007  
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EXAMINER

NGO, CHUONG D

ART UNIT PAPER NUMBER

2193

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	03/14/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

<b>Office Action Summary</b>	Application No.	Applicant(s)	
	10/643,777	AN, WEI	
	Examiner	Art Unit	
	Chuong D. Ngo	2193	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 21 December 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-85 is/are pending in the application.
- 4a) Of the above claim(s) 71-85 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-70 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>2</u> pages.  | 6) <input type="checkbox"/> Other: _____                          |

### DETAILED ACTION

1. Applicant's election of Invention I including claims 1-70 in the reply filed on 12/21/2006 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Claims 71-85 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected Invention.

2. Claims 1-30 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, "the first state vector", line 5, lack a proper antecedent basis. Claims 16 also have the same problem.

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 1-70 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

Claims 1-15 are directed to a computer implemented method of calculation. Claims 16-50 are directed to a computer readable medium having instructions for implementing the method, and claims 51-70 recite a sequence generator that is no more than a computer implementing the

method with each recited component corresponding to a function performed by the processor of the computer. In order for a computer related invention that is directed to such a computer implemented method of computation, a computer implementing a computation or a computer readable medium having instructions for implementing a computation, which are judicial exceptions under 35 U.S.C. 101, to be statutory, the claimed invention must accomplish a practical application. That is the claimed invention must transform an article or physical object to a different state or thing, or produce a useful, concrete and tangible result. State Street, 149 F.3d at 1373-74, 47 USPQ2d at 1601-02. Also see “Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility”, OG Notices: 22 November 2005. It is clear from claims 1-70 that the claims merely involve calculations and manipulations of data in performing computations. The inputs are numbers and the output are also numbers. The claimed invention does not transform an article or physical object to a different state or thing. The result produced by the invention is merely numerical values without a practical application recited in the claims to make the result useful, concrete and tangible. Therefore, the claimed invention is directed to non-statutory subject matter as the claims fail to accomplish a practical application.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

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6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-2,5,16-18,20,31-34,36,47 and 51-56 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Asano (6,295,301).

As per claims 1,2,16,17,31-34,36,47 and 51-54, Asano disclose in figure 7 a sequence generator including a first component (100,200) having a LFSR (100), a second component (300,500) for generating an offset sequence by: generating a reference sequence (output of 200) using the first component, determining an initial state vector (output of 501) using the second component based on a mask (400) associated with a first offset for the reference sequence (see col. 6, lines 49-51), and generating the offset sequence from the initial state vector using the first component as claimed.

As per claim 3,18 and 55, the initial state vector in Asano is also determined based on a characteristic polynomial  $G(x)$  as the mask is calculated as  $x^i \bmod G(x)$  (see col. 6, lines 50-51).

As per claim 5,20 and 56 Asano discloses in figure 7 the determining (500) of the initial state vector also based on a current state vector associated with the reference sequence.

8. Claims 48-50 and 67-70 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asano (6,295,301) as applied to claims 47 and 51 above, and further in view of Miller et al. (6,556,555).

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It is noted that Asano does not disclose the use of the sequence generator in each of a plurality of transceiver in a network for generating modulating offset sequence as claimed. However, Miller et al discloses in figure 1 a CDMA cellular telephone network having a plurality of transceivers including means for generating offset sequences (PN code, see col. 1, lines 10-27). Since Asano also disclose the sequence generator is to generating PN code in a CDMA communication system (see col. 1, lines 6-12), it would have been an obvious application to a person of ordinary skill in the art to use the sequence generator of Asano for generating a corresponding offset sequence in each transceiver in a CDMA cellular telephone network of Miller et al, and thus resulting in the invention as claimed.

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Chuong D. Ngo whose telephone number is (571) 272-3731. The examiner can normally be reached on Tuesday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Meng-Ai An can be reached on (571) 272-3756. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Chuong D Ngo  
Primary Examiner  
Art Unit 2193

03/08/2007